

## INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US00/16135

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) :C07K 14/71 14/60; C12N 15/18; A61K 38/25  
 US CL : 512/2, 12; 530/300, 324, 350; 536/23.1, 23.5, 23.51

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 512/2, 12; 530/300, 324, 350; 536/23.1, 23.5, 23.51

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

MEDLINE, EMBASE, CAPLUS, INPADOC  
 search terms: ghrh, growth hormone releasing hormone, chicken, gallus, thorner m

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	MCRORY et al. Expression and alternative processing of a chicken gene encoding both growth hormone-releasing hormone and pituitary adenylate cyclase-activating polypeptide. DNA and Cell Biology. January 1997, Vol. 16, No. 1, pages 95-102, especially Figure 2.	1, 3, 14
X	PORTER et al. Ontogeny of growth hormone (GH)-secreting cells during chicken embryonic development: Initial somatotrophs are responsive to GH-releasing hormone. Endocrinology. May 1995, Vol. 136, No. 5, pages 1850-1856, especially Figure 2.	1, 3, 14

Further documents are listed in the continuation of Box C.  See patent family annex.

• Special categories of cited documents:	"T"	later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X"	document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"B" earlier document published on or after the international filing date	"Y"	document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&"	document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means		
"P" document published prior to the international filing date but later than the priority date claimed		

Date of the actual completion of the international search

28 AUGUST 2000

Date of mailing of the international search report

19 SEP 2000

Name and mailing address of the ISA/US  
 Commissioner of Patents and Trademarks  
 Box PCT  
 Washington, D.C. 20231  
 Facsimile No. (703) 305-3230

Authorized officer *Claire M. Kauffman*  
 CLAIRE M. KAUFMAN  
 Telephone No. (703) 308-0196

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 98/32857 A1 (UNIVERSITY OF VICTORIA INNOVATION AND DEVELOPMENT CORPORATION) 30 July 1998, see entire document, especially SEQ ID NO:4.	1, 3, 7, 14
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A	US 5,695, 954 A (SHERWOOD et al.) 09 December 1997, see entire document, especially SEQ ID NO: 25 and 8.	9, 10, 13
A	WO 94/00482 A1 (THRONER et al.) 06 January 1994, see entire document.	1-6, 9-14, 16
		1-7, 9-14, 16

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**Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)**

This international report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.: 8 and 15  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:  

No SEQ ID NO:7 existed for the CRF or paper copy of the Sequence Listing. There is no claim 15.
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

Please See Extra Sheet.

1.  As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3.  As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  
1-16

**Remark on Protest**

The additional search fees were accompanied by the applicant's protest.

No protest accompanied the payment of additional search fees.

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**BOX II. OBSERVATIONS WHERE UNITY OF INVENTION WAS LACKING**

This ISA found multiple inventions as follows:

This application contains the following inventions or groups of inventions which are not so linked as to form a single inventive concept under PCT Rule 13.1. In order for all inventions to be searched, the appropriate additional search fees must be paid.

Group I, claim(s) 1-7, 9-14 and 16, drawn to GHRH ligand and receptor polypeptide and nucleic acid and method of enhancing feed utilization or growth and of production of lean muscle mass.

Group II, claim(s) 17, drawn to transgenic avian with ligand.

Group III, claim(s) 18, drawn to transgenic avian with receptor.

Pursuant to 37 C.F.R. 1.475(d), this Authority considers that the main invention in the instant application comprises the first-recited product, ligand that binds GHRH receptor of SEQ ID NO:4, and the first-recited method of using that product. Also added to the first group is the GHRH receptor (SEQ ID NO:4), and encoding nucleic acid for each product. Further, pursuant to 37 C.F.R. 1.475 (b)-(d), the ISA/US considers that the materially and functionally dissimilar product of Groups II and III do not correspond to the main invention. This Authority therefore considers that the several inventions do not share a special technical feature within the meaning of PCT Rule 13.2 and thus do not relate to a single general inventive concept within the meaning of PCT Rule 13.1.